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EXAMINER

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Claim Interpretation

1. The claims have been amended to remove the language “ornamental” from the previously claimed “ornamental designs.” Each claim now calls for “printed designs.” The specification provides an enabling description for ornamental designs printed on a polymeric film, nonwoven web or both (p. 10, lines 17-25, especially lines 18-19). Additionally, the specification describes measuring L Hunter values in areas outside ornamental designs that do not comprise a printed area (p. 13, lines 19-26, especially lines 19-21). Therefore Examiner interprets the claimed “printed designs” consistent with designs printed on a polymeric film, nonwoven web or both.
2. Since the claimed LL Hunter values are measured outside of printed designs, these color values are a material property of the backsheet lacking ink. The LL Hunter values therefore derive from the materials forming each of the polymeric film and nonwoven web. The specification provides examples of materials suitable for forming the polymeric film and nonwoven web (p. 7-8, lines 4-15, 16-4).
3. Additionally, claim 1 calls for opacity between about 55% to 100% in areas outside the printed designs. This property is therefore also a property of the ink-free, unprinted material.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1, 3, 4, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schleinz; Robert J. et al. (US 5458590) in view of Costolow; John J. (US 3972854).

7. Regarding claims 1, 10 and 11, Schleinz discloses a disposable article (col. 6, lines 28-39);

comprising a liquid pervious topsheet, a liquid impervious backsheet and an absorbent core positioned between said topsheet and said backsheet (col. 6, lines 44-57, Fig. 2, topsheet 22, backsheet 6 and absorbent composite 20);

wherein said backsheet comprises at least one polymeric film (col. 6, lines 44-52, Fig. 2, liquid impervious film 14); and

at least one nonwoven web formed of fibers (col. 6, lines 44-52, Fig. 2, nonwoven polyolefin fibrous web 8);

wherein said polymeric film and said nonwoven web each have two major surfaces (Fig. 2, film 14 and web 8 each having two major surfaces);

said polymeric film comprises a polymeric film material (col. 6, lines 44-52, Fig. 2, film 14); and

said nonwoven web fibers comprise a polymeric nonwoven web material (col. 7, lines 44-57, fibers of fibrous web);

wherein at least one of said polymeric film material or said polymeric nonwoven web material is color-pigmented by one or more pigments mixed therein prior to formation of said polymeric film or said nonwoven web (col. 7, lines 58-64, especially lines 61-64, pigments incorporated into fibers); and

wherein at least one of said polymeric film or said nonwoven web has visually discernible printed designs (col. 6, lines 28-39, printed designs);

said printed designs being provided by printing a pigmented ink onto at least one of said major surfaces of at least one of said polymeric film or said nonwoven web (col. 6, lines 52-57, Fig. 1, printing on outer visible surface 10; col. 7, lines 3-18, especially lines 14-18, printing on nonwoven fibrous web to alleviate need for overlying layer); and

said polymeric film being joined in an overlaying region across at least part of one of its major surfaces to at least part of an adjacent major surface of said nonwoven web to form said backsheet 6, lines 44-52, web 8 joined to film 14).

Schleinz discloses the invention substantially as claimed, see above.

Additionally, Schleinz forms film 14 and web 8 from the same polyolefins as disclosed in the specification (specification, p. 7, lines 4-15, polyethylenes and polypropylene; Schleinz col. 7, lines 26-32, 40-42). Schleinz analyzes the crockfastness rating or color-retaining ability of a printed substrate and reports CIELAB values (cols. 8-9, lines 62-12,

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especially lines 2-4). However, the claimed $L^* a^* b^*$ values analyze unprinted material, which is free of ink. Schleinz only analyzes printed samples which include ink, and is silent regarding the $L^* a^* b^*$ values of unprinted material. Therefore Schleinz lacks specific $L^* a^* b^*$ values as claimed [1, 10, 11].

Costolow discloses a method of controlling the color of fiber-grade polypropylene (col. 1, lines 3-17, col. 4, lines 15-20, Fig. 1, extruder 34 producing pellets of fiber-grade polypropylene); and

analyzes their $L^* a^* b^*$ color values (col. 1, lines 44-51, col. 5, lines 1-14).

Costolow analyzes unprinted, ink-free material and returns values overlapping the claimed ranges:

an L value for darkness/lightness-appearance from 10 to 75 or 10 to 65 (col. 5, tables for examples I and II having L values between +52.9 to +56.0);

an "a" value for red/green- appearance from about -50.0 to about +50.0 or about -35.0 to +25.0 (col. 5, tables for examples I and II having a values between -16.0 to -12.6); and

a "b" value for yellow/blue- appearance from about -50.0 to about +50.0 or about -35.0 to +25.0 (col. 5, tables for examples I and II having b values between +12.6 to +14.8).

Here, Costolow formulates a grade of polypropylene suitable for forming fibers. Both the specification and Schleinz form a film and nonwoven web with polypropylene. Additionally, Schleinz calls for printing with bright colors (col. 6, lines 40-44). Polypropylene having the $L^* a^* b^*$ values within the ranges of Costolow provides a

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bright background for these images. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Costolow as discussed with the fiber-grade polypropylene of Costolow in order to provide a bright background for printing images as called for by Schleinz.

8. Regarding claim 3, Schleinz discloses an absorbent article wherein one of said two major surfaces of said polymeric film and said nonwoven web is a garment facing surface (col. 6, lines 52-57, Fig. 2, outer visible surface 10); and

said discernible printed designs are provided by printing on at least one of said garment facing surfaces of said polymeric film or said nonwoven web (col. 7, lines 3-18, especially lines 14-18, printing on outer surface of nonwoven web).

9. Regarding claim 4, Schleinz discloses an absorbent article wherein:

said backsheet comprises a garment facing layer and a body facing layer (col. 6, lines 44-52, Fig. 2, backsheet 6 having web 8 and film 14); and

said nonwoven web is comprised by said garment facing layer (Fig. 2, web 8);
and

said polymeric film is comprised by said body facing layer (Fig. 2, film 14).

10. Regarding claim 7, Schleinz and Costolow disclose the invention as substantially claimed, see above. However, Schleinz and Costolow are silent regarding a distance between a rear end edge and a rear core end edge being about 40 mm as claimed [7].

The property of distance between edges is interpreted as a result-effective variable, subject to experimentation and testing. A result-effective variable is a parameter which achieves a recognized result. These results are obtained by the determination of

optimum or workable ranges of said variable through routine experimentation. The property of distance between edges achieves good fit for a baby through routine experimentation. For example, diapers are provided in sizes suitable for fitting infants of different sizes. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to adjust the distance between edges of Schleinz in order to fit infants of an average size. See MPEP 2144.05(II)(A,B). Also see in re Boesch and Slaney, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

11. Claims 2, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schleinz; Robert J. et al. (US 5458590) in view of Costolow; John J. (US 3972854), further in view of McCormack; Ann Louise et al. (US 6719742).

12. Regarding claim 2, Schleinz and Costolow disclose the invention substantially as claimed, see above. However, Schleinz and Costolow are silent to the specific opacity value of areas outside printed designs as claimed [2]. McCormack discloses a personal care product including diapers (col. 3, lines 17-20); and

selects a material for printing that has opacity from about 55% to 100% in areas outside printed designs (col. 9, lines 43-56, especially lines 43-48, Fig. 3, laminate 30 comprising opaque polyolefin polymeric sheet 42). Examiner interprets the “opaque polymeric sheet” of McCormack as having opacity of 100%, since McCormack does not disclose any departure from a maximum opacity and also calls for a material that creates a more distinct patterned fabric (col. 9, lines 50-56). McCormack selects an opaque sheet to enhance printed designs. One would have been motivated to modify

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Schleinz and Costolow with the 100% opacity of McCormack, since Schleinz calls for bright printed images as discussed for claim 1.

13. Regarding claims 5 and 6, Schleinz and Costolow disclose the invention substantially as claimed, see above. However, Schleinz and Costolow are silent to the specific percentage of the major surfaces covered with printed designs as claimed [5, 6]. The property of covered area percentage is interpreted as a result-effective variable, subject to experimentation and testing. A result-effective variable is a parameter which achieves a recognized result. These results are obtained by the determination of optimum or workable ranges of said variable through routine experimentation. The property of covered area percentage achieves masking of waste materials through routine experimentation.

For example, McCormack discloses a method of printing an absorbent article with an embossed design to conceal waste materials (col. 7, lines 30-37, "...employing colors that in effect neutralize the colors within the interior of the article..."). In other words, McCormack selects a coverage percentage is based on the ability of concealing waste materials as seen from the outside of an absorbent article. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to adjust the covered area percentage of Schleinz in order to mask a soiled absorbent article. See MPEP 2144.05(II)(A,B). Also see in re Boesch and Slaney, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

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14. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schleinz; Robert J. et al. (US 5458590) in view of Costolow; John J. (US (3972854), further in view of McFarland et al. (US 6096412).

15. Regarding claims 8 and 9, Schleinz and Costolow disclose the article as discussed above for claim 1. However, Schleinz and Costolow lack a half-toning printing process as claimed [8, 9].

McFarland discloses a process of printing absorbent articles with a half-toning printing process (col. 1, lines 14-24 and column 17, lines 52-60). Examiner notes that the process of halftone printing necessarily involves printing with an opaque ink (online encyclopedia, p. 1, paragraph 3), which is covered by dots to produce the effect of an additional color (online encyclopedia, p. 1, ¶ 2).

A halftone printing process creates the effect of additional colors for a user (McFarland col. 17, lines 52-60). The practice of printing within an area of a nonwoven web or major surface as claimed falls within the scope of obviousness, as required to print graphics on different areas of a diaper. McFarland provides the advantage of enhanced resolution, in addition to reducing the number of differently colored inks to create the impression of multiple colors (col. 18, lines 55-67, especially lines 55-58).

Schleinz calls for printing multiple techniques including flexography (cols. 3-4, lines 65-5), rotogravure printing (col. 4, lines 51-57) and multiple-color inkjet printing (col. 4, lines 58-65). Here, Schleinz suggests a need for multiple colors, provided by halftone printing. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Schleinz and Costolow as

discussed with the half-toning process as taught by McFarland in order to enhance graphic resolution and use fewer inks.

Response to Arguments

16. Applicant's arguments filed 16 July 2010 with respect to the rejection(s) of claim(s) 1-11 under 35 USC § 103 over Schleinz, Costolow, McCormack and McFarland have been fully considered but are not persuasive. Therefore, the rejection is maintained.

17. Applicant notes that Schleinz addresses inks and crockfastness of inks after printing, but is silent concerning the coloration of a printed substrate in areas outside the printing. Costolow teaches a method for controlling color and stabilizing fiber-grade polypropylene, by admixing agents with polypropylene homopolymer.

18. Applicant finds that Costolow does not tint or pigment polypropylene to produce particular color/lightness ranges, but instead monitors and strives to achieve particular Hunter values that show oxygen in the mixing process is properly regulated.

19. Applicant notes that Costolow teaches only polypropylene pellets and lacks a backsheet or nonwoven web. Examiner instead cites Schleinz as teaching the claimed backsheet and nonwoven web. Applicant reasons that Costolow fails to remedy the deficiencies of Schleinz, since Costolow does not form a nonwoven web from the polypropylene pellets. Examiner notes that Costolow discloses the polypropylene pellets as a stock material for fibers (col. 1, lines 3-17, especially lines 16-17). Also, claim 1 is directed towards a disposable article, not necessarily a method of producing. Costolow

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controls Hunter values by controlling oxygen, and achieves the same results for a fiber stock material.

20. Claim 1 calls for printing designs with pigmented ink, but does not analyze the Hunter values for the printed designs. Instead, claim 1 requires that areas outside the printed designs have specific Hunter values. The claim does not require that the Hunter values of the non-printed areas comprise pigmented additives, therefore controlling oxygen as taught by Costolow also achieves the claimed Hunter values.

21. Applicant asserts that motivation is lacking to combine Schleinz in view of Costolow, since the polypropylene of Costolow would not provide a bright background for Schleinz's images, and that Schleinz does not suggest a "bright background" for printing. Examiner finds motivation to provide a bright background, since the brightly printed designs of Schleinz will appear more vivid or clearly when printed on a bright background as opposed to a faded or fainter background. In other words, brighteners are routinely incorporated in printing substrates to increase brightness and the appearance of printed designs. For example, Schleinz selects titanium dioxide or a white pigment when formulating an ink (col. 6, lines 11-17, especially lines 11-12). Selecting a bright substrate for printing enhances the appearance of printed designs.

22. Applicant submits that previously cited prior art suggests that a backsheet having colors outside printed areas with the claimed Hunter values would be undesirable.

Applicant cites Tao et al. (WO 99/32164, p. 2, lines 23-26, "a high degree of whiteness, e.g., the visual appearance of the white color of the article as seen by the consumer, is very important to the consumer"). Examiner finds that the color range of Costolow is

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consistent with a bright background, since Costolow teaches an L value for darkness/lightness between +52.9 to +56.0 (col. 5, tables for examples I and II). In other words, Costolow teaches a bright background provided by controlling oxygen.

Conclusion

23. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

24. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to:

26. Adam Marcetich

27. Tel 571-272-2590

28. Fax 571-273-2590

29. The Examiner can normally be reached on 8:00am to 4:00pm Monday through Friday.

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30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tatyana Zalukaeva can be reached on 571-272-1115. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

31. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Adam Marcetich/
Examiner, Art Unit 3761

/Leslie R. Deak/
Primary Examiner, Art Unit 3761
13 August 2010